



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,873	07/14/2003	Hwan Koo Lee	1293.1814	3436

21171 7590 06/08/2005

STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

RODEE, CHRISTOPHER D

ART UNIT	PAPER NUMBER
----------	--------------

1756

DATE MAILED: 06/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/617,873

Applicant(s)

LEE ET AL.

Examiner

Christopher RoDee

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-13 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-13 and 15-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION***Claim Objections***

Claims 8 and 13 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 8 and 13 have been amended to state that the photoreceptor is "for a wet developing method that suppresses a decrease in charged electrical potential and dark decay upon repeated use". This new recitation still does not appear to further limit the photoreceptors of claim 8 and 13 because the recitation 1) is an intended use of the photoreceptor and 2) does not provide any additional limitation to the composition, structure, or properties of the photoreceptors. That is, the photoreceptors in the respective base claims have the characteristics recited for the dependent claims based on their composition and structure. If applicants are of the opinion that the dependent claims do provide a further limitation on the photoreceptors in the base claims they are asked to clarify in the written response. The recent amendment does not resolve this issue for the same reasons as given previously.

Claim 6 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The formula (10) fails to further limit formula (2) in claim 1 because the specific structure of formula (10) is not included within the scope of claim 1.

Claim Rejections - 35 USC § 112

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 8 and 13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. These amended claims now contain new matter because the specification as filed does not teach that the photoreceptor suppresses a decrease in charged electrical potential. A decrease in charged electrical potential appears to be desired in the photoreceptor ([0002]). The claims now recite the opposite of what is described in the specification and, consequently, contain new matter.

Claims 1, 3-6, 8, 15, 17, and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 states that X_3 is selected from the group consisting of the following C_{1-6} alkyls and the further X_3 s represented as set forth below in Formula (2) implementations. The Examiner has carefully considered these claims as now amended, but the claims remain indefinite and, in fact, appear more confusing than before. It is unclear which formulae are "the following C_{1-6} alkyls" and which X_3 s "represented as set forth below in the Formula (2) implementations". It is unclear if a single X_3 is required a plurality of X_3 s. Clarification is required.

Claim Rejections - 35 USC § 102

Claims 1-6, 8, 10, 13, 15, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 07-281456. An English language machine translation of the JP document accompanied the first Office action.

This rejection was presented in the last Office action. Applicants are understood to traverse this rejection because the resin in the JP reference has additional units separating the biphenyl fluorene units. Applicants are also understood to take the position that these additional units alter the physical properties of the binder resin. Consequently, the JP reference cannot anticipate the instant claims.

The Examiner has carefully reviewed applicant's remarks. The instant claims require a polyester resin as the binder resin that has units of the Formula (1) in the main chain. Contrary to applicant's position, these are not the only units in the resin main chain. Additional units must be present to provide the ester (i.e., -COO-) linkage required for a polyester. The claims are open as to how these ester linkages are obtained. Possible linkages are disclosed in Formulae (4) through (8). These are all specific resins falling within the scope of the polyester having units of the Formula (1). As seen in each resin, additional atoms or units are present to give the polyester linkage. Also, the oxygens of the biphenyl fluorine form part of the ester linkages in these resins. This is the same type of connection disclosed by the JP reference. Specifically, compare JP reference Formula (1) with Formula (5) of the instant claims. These are the same polymers.

Clearly, the polyesters disclosed by the JP reference meet the requirements of the instant claims' polyester. The rejection is still seen as proper and is maintained.

Claim Rejections - 35 USC § 103

Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 07-281456 in view of *Handbook of Imaging Materials*. New York: Marcel-Dekker, Inc. (11/2001) pp. 145-164 to Diamond.

This rejection was presented in the last Office action. Applicants traverse this rejection because neither reference discloses the specific polyester of the instant claims. This traversal is not found persuasive because the JP document does disclose a polyester binder resin according to the formula for the same reasons as given above. The rejection is proper and is maintained.

Claims 1-8, 10-13, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katsukawa *et al.* in US Patent 6,187,493 in view of Kanamura *et al.* in US Patent 6,043,334.

Applicants traverse the instant rejection because Katsukawa "fails to disclose, teach, or suggest the 'naked' biphenyl fluorine repeating unit of Formula (1)". Although this appears to be accurate, the instant claims do not require and actually do not permit a naked biphenyl fluorenone repeating unit. The resin must contain other units not shown by the Formula 1 because the resin must be a polyester. There are no atoms present in the Formula 1 that show ester linkages. Consequently, the claims are not limited in the manner asserted in the response. This is evidenced by the specific formula shown in dependent claims 3 and 4.

Applicants also traverse the rejection because the combination of elements may be known but the combination is difficult to use. Applicants then cite a description of Thomas Edison's endeavours. The Examiner has carefully considered applicant's remarks but given the fact that the primary reference specifically teaches the use of antioxidants in its photoreceptive

Art Unit: 1756

layer and the secondary reference discloses specific antioxidants for photoreceptive layers there appears to be ample motivation, in light of the high level of skill in the electrophotographic arts, to render the instant claims *prima facie* obvious. The problems faced by Edison appear to be unrelated to the subject matter of the instant invention, particularly in view of the fact Edison's work was conducted over a century ago and the skill in the scientific arts is substantially higher now than then.

The rejection is still see as proper and is maintained.

Claims 8, 13, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokota *et al.* in US Patent Application Publication 2004/0009419 in view of Kanamura *et al.* in US Patent 6,043,334.

Applicants traverse this rejection because of the certified translation of the priority document. The Examiner has carefully considered the priority document to determine if the previously rejected claims are described by the document within the meaning of section 112, 1st paragraph. Although the majority of claims are described properly, the priority document does not disclose claims 8 and 13 for the same reasons as given in the section 112, first paragraph, rejection above. Furthermore, the priority document does not describe the electrophotographic cartridge and image forming apparatus of claims 17-20. Because these claims are not described by the priority document, priority under section 119 is not available for these claims.

The rejection is maintained for the claims indicated above.

Double Patenting

Claims 1-8, 10-13, and 15-20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-18 of

Art Unit: 1756

copending Application No. 10/459720 (corresponds to US Patent Application Publication 2004/0009419 discussed previously) in view of Kanamura *et al.* in US Patent 6,043,334. The copending application claims a photoreceptor having the requirements of the instant claims except for the presence of antioxidants. The disclosure of the copending application is available under section 102(e). This disclosure teaches that antioxidants are effective in the claimed photoreceptors. The copending claims do not specify the claimed antioxidants but Kanamura does disclose these components, as discussed above.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a known photoreceptor antioxidant such as those of Kanamura in the claimed invention of Yokota because Yokota teaches that phenolic antioxidants are usefully included but does not specify phenolic antioxidants. The artisan would look to other references in the art for useful antioxidants and Kanamura discloses a specific group of antioxidants that are known to be effective in photoreceptors. The artisan would have found it obvious to optimize the amounts of the antioxidants in order to obtain the antioxidant effect in the produced photoreceptor.

This is a provisional obviousness-type double patenting rejection.

Applicants traverse the rejection because the claims of the copending application and the claims of the instant application have not yet been allowed. Arguments directed to the rejection or filing of a terminal disclaimer are seen as premature. Consequently, the rejection will be maintained.

Conclusion

Art Unit: 1756

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher RoDee whose telephone number is 571-272-1388. The examiner can normally be reached on most weekdays from 6:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/617,873

Page 9

Art Unit: 1756

cdr

31 May 2005

A handwritten signature in black ink, appearing to read 'CRD', with a long horizontal flourish extending to the right.

CHRISTOPHER RODEE
PRIMARY EXAMINER